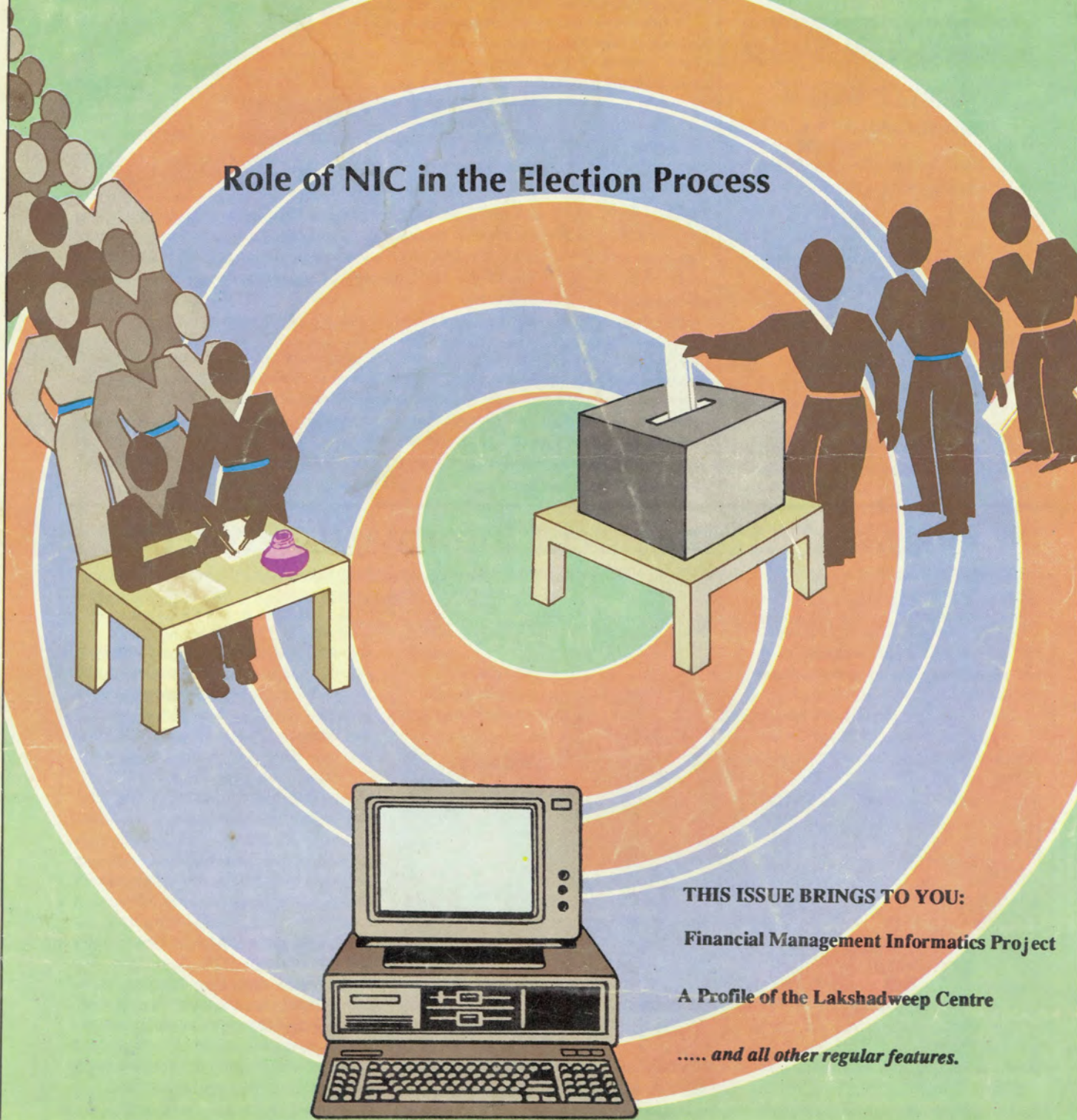


Informatics



Role of NIC in the Election Process



THIS ISSUE BRINGS TO YOU:

Financial Management Informatics Project

A Profile of the Lakshadweep Centre

..... and all other regular features.

FROM YOU TO US

Readers are requested to send their feedbacks --- suggestions, opinions and views --- for this column. ---- Editor.

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EDITOR'S NOTE: With the second issue of INFORMATICS reaching you, the emphasis will now be on maintaining a steady and timely course.

INFORMATICS has been very aptly defined as "Information on Information", thus giving us the theme on which to work.

New technologies usher in new ways of information processing and dissemination. In our Country, the National Informatics Centre has flung its net far and wide in the field of Informatics --- the amalgamation of information with the latest in technology. NIC not only provides a sound system of information for decision support, but also makes available to its Users infrastructural facilities of the magnitude of NICNET. The depth of NIC services goes right down to the district level, whereas its breadth encompasses a multitude of fields ranging from general information through GISTNIC to field-specific systems such as the Land Information System.

For the decisionmaker who wants to have all these facilities at his disposal, the first step is to obtain the latest information on information services that are available.

INFORMATICS seeks to keep you abreast of all that is happening in India's premier decision support Organization.

Rubaiyat Ali

"QUOTABLE QUOTES"

FROM THE MEET ON LAND RECORDS COMPUTERIZATION HELD AT NEW DELHI DURING MAY 29-30, 1992.

While NIC's role in supporting the Ministry of Rural Development in computerizing land records up to the tehsil level is laudable and should be further promoted, the more important role of NIC during the Eight Five Year Plan would be in providing NICNET up to the tehsil level for enabling a large number of voluntary organizations to feed monitoring data up the hierarchy.

--- Shri Pranab Mukherjee, Deputy Chairman, Planning Commission.

It has convinced us that a setup like NICNET with nodal centres in several districts is essential, and all rural development information systems should knit around this infrastructure. This helps not only the maintainability, but also the economy of scale of operation. It is in this background that we are looking forward to the expansion of NICNET during the Eighth Five Year Plan to tehsil and subsequently to the block level.... This would be a very major technical feat.

--- Shri S.R. Sankaran, Secretary, Rural Development, Government of India.

Financial Management Informatics Project

The Eighth Five Year Plan of the National Informatics Centre is a blue print of action of the Organization. Each 'Leaf of NICPLAN' presents an extract from the Plan to provide the Reader with an insight into just how the Organization visualizes the future. In this issue we present the Financial Management Informatics Project.

The integrated Financial Management System for a State comprises of the following:

- Treasury Accounting System.
- Accounting of Central Transactions and State Transactions put through by AGs.
- Financial Resources Information System (Sales Tax, Land Tax and other revenues)
- Budget System interface to account and Financial Resources Management System.

The magnitude and volume of the financial transactions in the Government necessitated the availability of a reliable management information system for accounts. The system will assist the management in monitoring and analysis of plan schemes, programmes and activities, and securing itemised control over expendi-



ture and serve as a tool for effective management of the various operations entrusted to the Treasury.

When this information is linked to the Budget Information System, it will provide to the State Governments an online information system relating to availability of financial resources. To begin with, the development of a computer-based MIS on

financial transactions taking place at the district level is required. The implementation of this project has already been taken up on a pilot basis through NIC funds in the State of Maharashtra in all its districts and four districts of Madhya Pradesh.

During the Eighth Five Year Plan period, this will be implemented in all the States. When enhanced NICNET is made available through packet radio extension, the stage is set for the implementation of the Financial Management Information System in every State starting from the tehsil level, going up to the District level and consolidated at the State level. The rest of the investment required for creating the necessary databases can be taken up by the State Governments which can utilize the enhanced NICNET facility without having to make additional investments in hardware and software.



ADVISOR VISITS J&K UNIT

JAMMU & KASHMIR, July: Lieutenant General MA Zaki, Advisor to the Governor, Jammu & Kashmir, visited the J&K State Unit of NIC on July 30, 1992 for an on-the-spot evaluation of the ongoing computerization effort in the Public Health & Engineering (PHE) Department, said a report from our J&K State Unit.

The Advisor, who was accompanied by the Commissioner/Secretary, PWD, visited various sections of the State Unit, and was apprised of the projects involved in the computerization effort.

A statistical and graphical analysis of the availability of drinking water in the rural areas of J&K was presented to the Advisor.

The Advisor appreciated the work done by the Centre and hoped that other areas would also be within the ambit of computerization. 

NIC IN RAJYA SABHA

NEW DELHI, August: The Minister of State for Personnel and Training Ms Margaret Alva informed the Rajya Sabha on August 20, 1992 that National Informatics Centre had been entrusted with the responsibility of installing an electronic examination system for the civil services examination.

NIC will try the mechanism with an internal mechanism in November this year. The Minister further said the essential thing was to establish credibility in the examination system as this had been eroded to some extent because of reports of leakages of question papers.

She informed that the Prime Minister had suggested the introduction of the electronic system to ensure secrecy in the examination process. The Union Public Service Commission had expressed its desire to take full advantage of the up-to-date technology available to modernize the civil services examination, and ensure confidentiality and secrecy in the examination system.

A working group in the Ministry is preoccupied with the work, and was also examining how best the existing centres of NIC could be used. Test runs have been made, she said. (Courtesy— *The Independent*, August 21, 1992). 

ALL SET FOR TAX COMPUTERIZATION

NEW DELHI, August: The Central Board of Direct Taxes has accorded approval to a project for computerization of the Tax Department, says a report from the Fiscal and Financial Resources Informatics Division, NIC.

The National Informatics Centre has been working with the Income Tax Department, mainly with the Central Board of Direct Taxes at Delhi, for the last few years. At the instance of the then Revenue Secretary a quick systems study for computerization in the Income Tax Department at Bombay and Delhi was completed in June, 1991. With 24 Commissioners of Income Tax (CITs) in these two Cities, they account for nearly 50 per cent of the Country's direct taxes.

The approach proposed by NIC consists of providing large computer systems in the Cities for *challan* processing with comparatively smaller systems located in each CIT. Sufficient number of terminals would be provided in the CITs to cater to the workload. These systems will be appropriately networked. Subsequently, NIC was asked to conduct a detailed feasibility study for these two Cities. This was completed by NIC jointly with the officers and staff nominated by the Central Board of Direct Taxes sometime in January, 1992. NIC made a detailed presentation of the findings of the study to the Board.

Two one-day training programmes were then organized by NIC to acquaint the Commissioners and the Deputy Commissioners respectively with the proposed scheme of computerization, and also to demonstrate to them the working of the software package in its initial form. These training programmes were attended by over 60 officials.

The project is now awaiting formal financial approval from the Ministry of Finance, added the report. 

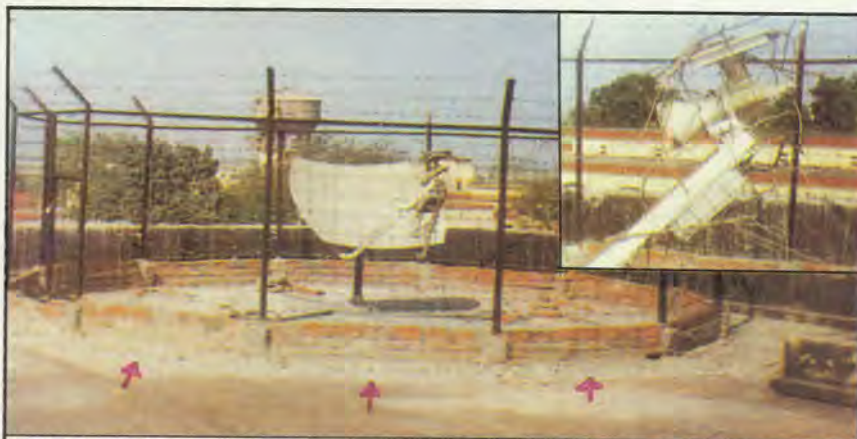
KEEPING MONKEYS AT BAY

The utility of National Informatics Centre's satellite communication system NICNET has far surpassed all expectations. So much so that user response has not been restricted to the species of *homo sapiens* alone. In Uttar Pradesh, man's not so distant cousins — the monkeys — have devised their own way of putting NICNET equipment to use. And for once NIC, has had to put its foot down and say no!

It all started in remote areas of Uttar Pradesh such as Barabanki, Gonda, Kanpur, Sitapur etc. where baby monkeys, much to the chagrin of NIC officials, found that VSATs could be conveniently used as swings. Not to be left out, the elders joined in the fun and frolic jumping on the antennas and chewing up the co-axial cables.

Maintenance firms were reluctant to maintain these monkey infested sites. Before matters could come to a head however, NIC personnel, true to the Organization's record of adaptability, came up with an ingenious way of keeping the monkeys at bay. Antennas were fenced off with barbed wire; upconvertors feedhorns and down-convertors covered with local 'babool' stems with thorns, and the space between the antenna and the barbed wire fence was floored with broken pieces of glass with sharp edges projecting out.

This low-cost solution works out to around Rs 12,000 for each VSAT, and has effectively helped in maintaining better up-time of Micro Earth Stations (MES) in Uttar Pradesh. Relieved NIC officials now quip, "Wise monkeys better not monkey with NIC's VSATs in the future." 



A fenced off antenna. INSET: Feedhorn and convertors covered with babool stems.

ELECTION RESULTS NETWORK

NIC's Election Experience : A Rich Harvest

The Tenth Lok Sabha Election heralded a new dimension in the elections process --- the large-scale use of computers and satellite-based computer networks. The difference was felt as the Nation watched the election results bulletins and analyses by Pranoy Roy and Vinod Dua with awe and admiration. Few however realized that the show was, in essence, being run by people who worked with their terminals round-the-clock. Mr S Sarkar, Technical Director, Teleinformatics Development Promotion Project (TDPP), NIC, speaks on the role and relevance of NIC in this great exercise considered to be the foundation of any democracy.

For all of us in the National Informatics Centre, the Tenth Lok Sabha election was something of an eye-opener. We learnt that society renews and invigorates itself through elections, and all those who participate in the electoral process are themselves invigorated by it.

The Indian Solution

That India found a reliable and nearly instant solution for reporting election results was resoundingly demonstrated during the nation-wide parliamentary elections to the Tenth Indian Lok Sabha.

The Solution was to couple the television network as an output channel for NICNET, thus combining the information collecting power of the satellite data network with the nation-wide broadcast capability of Doordarshan. The coupled networks achieved a tremendous throughput of public information that sustained public interest in, and monitoring of, the results counting process.

Build-up to the Polls

The Results Information Network benefitted from the close relationship built up by our District Informatics Officers with their respective District Collectors long before the counting day. The NIC district offices and State Headquarters provided vital NICMAIL links in the communication chain between the State Chief Electoral Officer and his Returning Officers in the districts. This allowed the massive logistics involved to be more closely supported.

In many districts, the DIOs went one step further and offered local computerized planning support to the District Commissioner, who in most cases was also the Returning Officer. ELECON was the most widely used of these packages, developed by the DIOs themselves based on their local requirements.

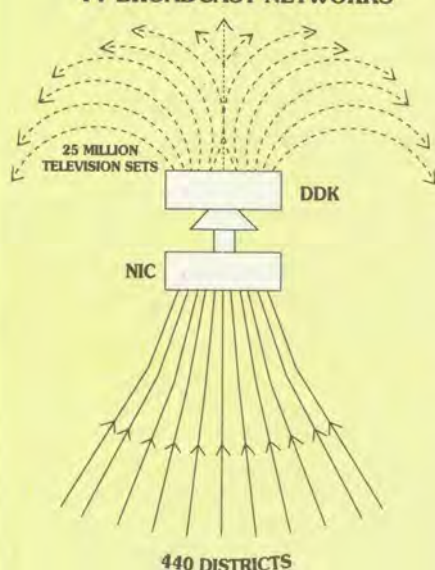
Significance of Success

The success of NIC's elections projects demonstrated several points crucial to the future of NIC.

NICNET performance was proved in a "worst case" situation of on-line load. All previous experience had been with individual terminals connected to different applications at different times in the normal time-sharing way. The Lok Sabha elections was different because all NICNET terminals had to be connected to the same application at the same time, thus testing NICNET and the NEC host to the extreme. NEC had to be completely reconfigured by the ACOS unit to handle this new usage.

More significantly, the elections exercise revealed hidden depths to NIC's organizing ability. This was most clearly demonstrated by the personal enterprise and dedication shown by the District Informatics Officers and Assistants in getting the results from counting rooms and entering

COUPLING OF NICNET AND TV BROADCAST NETWORKS



The Credibility Factor

In a democratic society, elected representatives can govern effectively only if their electoral victory is deemed credible by all citizens. Apart from vote casting, it is vital that vote counting be fair, and also be seen as fair. This implies immediate round-by-round result reporting for each constituency to as large an audience as possible.

Should this not happen, the upshot can be disastrous. The example of the recent elections in the Philippines is a case in point. Although the actual voting went through fairly smoothly, counting and tabulation took over a month. This led to all the candidates making rigging and tampering charges, and the resultant damage in overall credibility. Considering that India has eleven times the land area and fourteen times the population of the Philippines, the importance of the result reporting process for India is obvious.

TECHNICAL OVERVIEW

The Elections Results Network was composed of three functional layers. The bottom layer was the communications backbone, consisting of the normal NICNET configuration of one micro-earth station at each of the 440 district collectorates, all connected to the Master Earth Station packet switch at Delhi via the INSAT-ID satellite.

The second layer consists of the NEC S-1000 large mainframe with the Elect results entry software at NIC headquarters and the PC/386s and dumb terminals, one at each district collectorate. This layer used the underlying communication backbone to exchange information. Menu screens and prompts were emitted from the NEC to the network via the packet switch, while commands and round-by-round results flowed in from the district offices.

Forming another part of the second layer were the specially written communication modules which enabled the NEC to transmit the results out to the presentation locations.

The third functional layer consisted of hardware and software that consolidated and presented the results. Consolidated results were presented by a third level programme on NEC that read detailed constituency files provided by the ELECT module and output statewide party positions and overall national party position.

At remote sites the presentation hardware included:

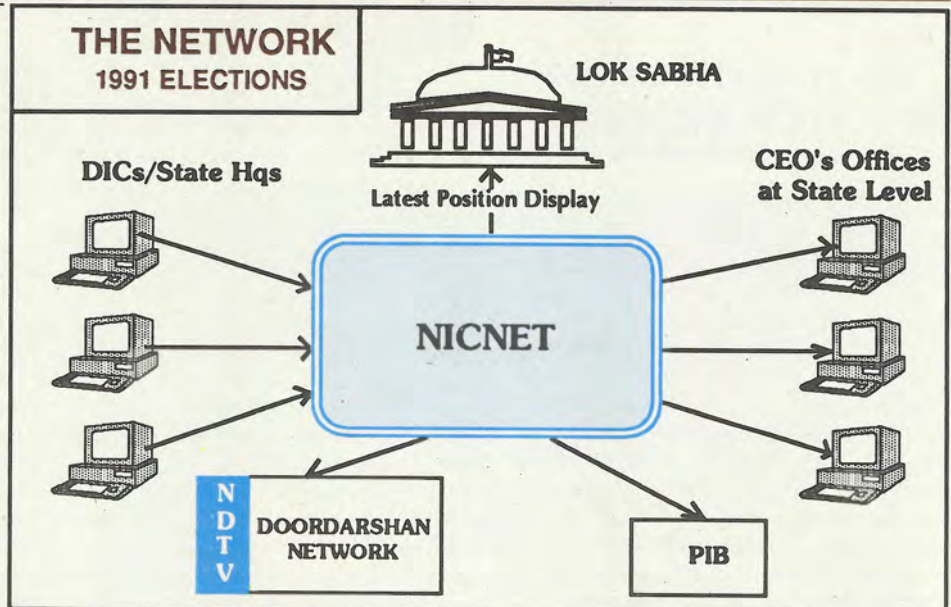
- the NDTV television graphics generator at Doordarshan Delhi studios. This provided colourful templates into which the results data could be slotted, and output in the form of a PAL TV signal, suitable for national telecast by Doordarshan.
- three 486 machines at NIC Headquarters, used for interactive retrieval of results by all sites hooked up with NICNET.
- a PC/386 at the Press Information Bureau (PIB) for generating printouts of query answers for newspaper reporters.

them over a period of 48 hours, often without sleep. In those cases where counting for one parliamentary constituency was split up over several district collectorates, the State Informatics Officer and DIOs concerned responded by organizing their own NICNET sub-networks to accumulate round results for that constituency at one place before using the ELECT program.

Future Possibilities

In view of the current liberalization effort underway in the Government, it is possible that NIC may be able to offer its services to private users. The Elections Results Network is an example of the wide area on-line capability of NICNET. A head office anywhere in the Country can collect data from remote warehouses, factories and offices not only for Management Information Systems, but also for daily operations streamlining. Lower inventories could be maintained, shipments could be monitored, and any emerging shortage or irregularity could be spotted in advance.

THE NETWORK 1991 ELECTIONS



The Elections Results Network points the way to all these future applications. The role of the National Informatics Centre in the 1990 elections has paved the way for extensive use of computer networks in nationwide on-line information collection.

(For further information please contact Mr S Sarkar, Technical Director, Teleinformatics Development Promotion Project, National Informatics Centre, A-Block, CGO Complex, Lodhi Road, New Delhi - 110 003).

The involvement of NIC in the Tenth Lok Sabha Elections resulted in a rich harvest in experience. Problems faced, and how to tackle these in the future; plans for improvement and new ideas are the manifestations of experience. An example is in what **Mr Mohan Reddy, Software Development Project Leader, Headquarters**, has to say on the collection of candidate names and their party affiliations:

"One system improvement that will definitely be required will be in the collection of candidate names and party affiliations through a forms program similar to ELECT. Last time, this voluminous basic information was sent in over NICMAIL, and had to be typed in again at Headquarters. Thanks to the two trial runs, the DIOs were able to point out all the spelling mistakes and wrong party assignments. But all of us have other urgent matters to attend to in those last few days, and we have to avoid this duplication of effort."

DIOs are requested to contribute similar feedbacks. We will publish the most interesting ones here, but all articles will be studied at Headquarters for ideas and information. State Informatics Officers are also requested to enlighten us on the state level planning they have to undertake for the elections.

PHOTOTALK

The underground Master Earth Station (MES) with its antennas against a backdrop of the SAIL Building adjoining NIC Headquarters at Lodhi Road, New Delhi.



MIS-PT: SOFTWARE FOR EDUCATION DEPARTMENT

Management Information System for Primary Teachers (MIS-PT) is a comprehensive software package developed to computerize the working of the Zilla Education Department under the control of a Chief Executive Officer. This integrated package supports all levels of activities of the Education Department right from that of primary teachers through the establishment staff to the decision makers.

Developed by the District Informatics Officer and District Informatics Assistant of the District of Kohlapur in Maharashtra, the package has been fully operational in the District for the last two years, and is also gradually being implemented in all the other districts of Maharashtra.

MIS-PT incorporates major functions such as primary teachers payroll processing, pension calculations, GPF accounting, recruitment of teachers, school information, roster maintenance, expenditure details, transfer of teachers and enrolment details.

Major databases maintained by the package include the Primary Teachers Database (created blockwise), and the Schools Information Database.

Another salient feature of MIS-PT is the provision of on-line query module facility. This query module, consisting of a menu with three options --- "District/Taluka at a Glance", "Employee Status" and "Querying a Database with condition or without Condition" --- enables decision-makers to retrieve specific information. **(For further information please contact Mrs SP Sardesai, PSA ; Head, Application Division V, National Informatics Centre(WR), Udyog Bhawan, Ganesh Khind Road, Pune - 411 007).**

KEEPING TRACK OF ELECTRONICS GROWTH

The spectacular growth of the electronics industry of the Country in the past few years necessitated the development of a reliable and comprehensive information system for easy and fast access to the voluminous information on production and export of electronic items. In response to this, the National Informatics Centre has designed and developed the Electronics Industry Information System (EIIIS) Rel 1.0 in co-ordination with the Data Bank and Information Division (DBID) of the Department of Electronics (DOE).

EIIIS is a user-friendly search and retrieval software package which will help in the analysis of the vast amount of electronics data as well as to study the growth and current trends of the electronics industry.

The source of data for the system is the "LIPS" integrated database which is maintained and regularly updated by the DBID on the NEC S-1000/20D mainframe computer system in the NIC Headquarters at Delhi. EIIIS Rel 1.0 with data for the period of 1981-90, has been made available to Users since June 1991. The database will be updated every year.

The Electronics Industry Information System package is being distributed as a twin floppy set with a User's Guide and product classification. **(An updated version, EIIIS Rel 1.1 is to be released shortly with updated data for 1991. For further information please contact Dr S Banerjee, Biotechnology Division, NIC.)**

SOFTWARE FOR AGRICULTURE CENSUS

The Western Regional Centre of the National Informatics Centre NIC(WR) has developed a common software to process data from the Agricultural Census 1990-91 which is being conducted throughout the Country as part of the World Agricultural Census Programme.

The census, conducted on a sample basis, is being carried out by the State Governments. The work is being co-ordinated by the Ministry of Agriculture and Co-operation, New Delhi. The input and report formats of the Census being basically the same for all the States, it was thought best to develop a common software and provide it to the NIC State Centres for implementation in the respective States. This plan to develop a common software was approved in the Conference of Agricultural Census Commissioners.

Considering the portability and volume of data, the programs for the package have been developed in COBOL. The software is available on NEC-S1000, ND-550 and PC/AT-386-Xenix.

The necessary documentation for the software has also been completed, and the programs (source codes) along with required documentation have been distributed in all NIC State Centres. A two-day workshop was organized in Pune from May 21, 1992 to explain various aspects of the System. Representatives of 15 NIC State Centres participated in the workshop. **(For further information please contact Mrs SP Sardesai, Principal Systems Analyst; Head, Application Division V, National Informatics Centre(WR), Udyog Bhawan, Ganesh Khind Road, Pune - 411 007).**

THREE NEW PRODUCTS FROM A&M DIVISION

ANALYST: Analyst is an on-line statistical analysis tools package. Available on the NEC System, with data interfaces to the General Information Systems Terminal of NIC (GISTNIC), International Monetary Fund (IMF) and ECO databases, the Analyst provides the User with requisite analytical power for timely analysis. Researchers, Economists and Planners will find Analyst a great help in indicational analysis.

A new Xenix/Unix version of Analyst is also available now. This new version is user-friendly and menu-driven, and provides around 40 statistical techniques along with graphs such as bar, histogram, xylot etc.

The Analytics and Modelling Division NiC presents three new products in the field of software development.

TRANSYS: A generalized decision support system for transport and distribution planning, it is based on multi-objective criteria, and has been developed using the "goal programming" approach.

It is a user-friendly system which formulates the models on its own and generates various types of analysis reports. It runs on Xenix/Unix machines. It can be widely used in the area of product movement such as those of coal, foodgrain, steel and its products etc.

KEEPING TABS ON THE ECONOMY: The Analytics and Modelling Division has recently developed a computerized system to forecast and monitor the monthly price indices of all commodities for various economic ministries of the Central Government. The Micro Time Series, using Univariate Box Jenkins Method, is utilized to obtain the forecasts.

The rate of inflation with confidence region has been forecast for the year ending on March 1993. These forecasts will be monitored very closely as part of early warning signals by Planners.

INFORMATICS ON WHEELS

The West Bengal State Unit of the National Informatics Centre has undertaken a project with the objective of providing computerized information system support to the Department of Transport, Government of West Bengal. The project was inaugurated by the Chief Minister of West Bengal, Mr Jyoti Basu in January this year.

Under this project, information system support will be provided to the Public Vehicle Department (PVD) at Calcutta and the Regional Transport Offices (RTOs) in the districts of the State.

Tasks such as tax collection, issue of duplicate tokens, instalment payments, monitoring of High Court cases, removal of vehicles, surrender of vehicles etc. are already being handled through this system. Daily accounting of taxes, monitoring of complaint cases, issue of demand notices for vehicles with tax defaulters and logging of transactions of various types are already available in the system.



West Bengal Chief Minister, Mr Jyoti Basu inaugurating the project.

Registration of new vehicles, tax collection of non-transport vehicles, issue of permit and licence etc. are to be covered in the next phase of the project.

The system has 100 MB of on-line database, out of which 70 MB is being used by tax transaction work while the remaining support tax history information.

GISNIC:MAPPING A NEW COURSE

The Geographical Information System of the National Informatics Centre (GISNIC) is a system for storing, retrieving and analyzing geographically referenced data sets.

With the emergence of databases in the Eighties, computer cartography is now fast emerging as a superior tool in accessing and interpreting the contents of these databases.

In a Geographical Information System, both spatial (eg. maps, satellite imagery) and non-spatial (eg. census data, field data) data sources can be integrated, and a set of spatially registered data layers can be analyzed independently or in combination with a number of other layers. Thus, one can stitch together bundles of data from a wide variety of sources, and manipulate them to get quantitative information for resource management & planning.

GISNIC Version 1.0 is the outcome of a novel experiment at NIC to develop a set of tools for retrieval and transformation of both spatial and non-spatial data.

GISNIC is a microcomputer-based modular, Geographic Information System (GIS) which operates on the PC AT/386 family of micros under SCO XENIX. GISNIC has been designed specifically for microcomputers using state-of-the-art GIS concepts. GISNIC employs phenomenological structuring for modelling complex phenomena observed in real-life situations. It allows feature hierarchies to organize spatial data. Various geographical features can be represented as point, segment or region. Different feature types can be combined in a single map.

GISNIC utilizes state-of-the-art client-server architecture to link attribute data with various spatial features. Any relational database management system can be used as backend for accessing non-spatial data. Attribute information can be organized independently, or may be taken from an existing MIS. (For further information contact: DISNIC Software Division, National Informatics Centre, A-Block, CGO Complex, Lodhi Road, New Delhi - 110 003.)

OUTPUT AND DISPLAY

- General graphic display for a variety of graphic devices.
- Defining and generating graphics or reports in both interactive and batch modes.
- Saving and editing macros which define map composition for application to other maps.
- Plotting multiple coverages or database layers over one another.
- Providing window-to-viewport transformations for scaling, rotation and map positioning.
- Clipping graphic elements occurring outside specific map window.

MONITORING FCI GODOWN CONSTRUCTION

The Food Corporation of India (FCI) has entrusted the National Informatics Centre with developing a system for on-line monitoring of construction of about 100 of their storage godowns. The construction of these godowns has been envisaged in the national Eighth Five Year Plan to generate an additional storage capacity of 10 lakh with a financial outlay of approximately Rs 100 crore.

The system, which is to be developed on a turn-key basis, will cost Rs 11.09 lakh, and is to be implemented within a period of six months. System development is underway, and will be completed very shortly.

The plan is to initially monitor 15 sites in which construction is underway. The data from these sites, as changed activities, will be transmitted through NICNET from NIC district and state centres to the FCI Headquarters. Using the system developed, the data will then be processed to generate reports for all levels of monitoring agencies. For the monitoring phase, all concerned with monitoring will be provided appropriate training and training material.



THE LAKSHADWEEPS : NOT SO FAR AWAY

Speak of islands, and the mind immediately conjures up images of isolated pieces of land jutting out from the sea, green palm groves and waves breaking against rugged shorelines. Land cut off by nature from the rest of the world. The scenic Lakshadweep archipelago, in the Arabian Sea, off the coast of Kerala, is no different. Of its 36 islands, only 10 are inhabited. Kavaratti is its administrative Headquarters. It is in places like this where the science of information technology will be put to its ultimate test. And the National Informatics Centre, being at the forefront of all that is happening in this field in the Country, takes on itself the task of proving itself in the Lakshadweeps.

THE GROUNDWORK:

The Lakshadweep Union Territory Unit of the National Informatics Centre was made functional in October 1988 with the posting of three NIC personnel. As the the Union Territory was as yet unexposed to computer technology, training courses were conducted on a priority basis to familiarize the employees of the Administration with computers.

Simultaneously, studies of the working of the Administration were conducted to identify areas in which NIC could contribute meaningfully, and also to develop a strategy of going about the task. These studies revealed that the informatics of these Islands were quite divergent from that which existed in other parts of the Country.

NICNET TAKES OVER

The role of NIC's computer-based satellite communication system, NICNET, takes on new meaning in the context of a centrally administered Union territory in the case of which proper administration involves voluminous data exchange between the Islands on one hand, and the Ministries situated at New Delhi on the other. As far as the data flow between the Union Territory and the Ministries is concerned, NICNET became an invaluable means of efficient, reliable and faster data transfer. NICNET services were further fine-tuned with the provision of a terminal, connected with NIC's NEC computer at New Delhi, to the Liaison Officer of the Lakshadweep Administration.

Preliminary studies revealed that NICNET could play a fruitful role in informatics dissemination at the Union Territory level only when services were ex-

tended to all the Islands so that there could be regular and correct flow of information from all the constituent Island to the Headquarters at Kavaratti. To this end, an unit of NIC was established in the southernmost Island of Minicoy and linked with NICNET. Another unit was set up in the Lakshadweep office at Koshi which handles all the transportation and public relations requirements of the Administration with the Mainland.

FROM STRENGTH TO STRENGTH

There was no looking back.

NIC's General Information System Terminals (GISTNIC) services was introduced in Kavaratti with the setting up of a public booth in the quadrangle of the Secretariat in 1991.

The DISNIC Health software has been utilized for monitoring the Universal Immunization Programme being implemented in the Lakshadweeps.

Computerization of the employment exchange live registers by the NIC Lakshadweep Centre has helped in proper and systematic sponsoring of candidates for job vacancies.

The NIC Lakshadweep Union Territory Unit regularly transmits data relating to the 20-point Programme and the Essential Commodities Prices Monitoring process through NICNET as part of the ongoing national exercise.

ON THE CARDS

This is not all. A host of new projects have been taken up to further the cause of informatics in the Island. These include:

- Land records computerization.
- Implementation of NIC's Computerized Rural Information Systems Project (CRISP).
- Computerization of the Planning and Accounts Wing of the Lakshadweep Administration in terms of plan activity and annual budget monitoring.

WHAT EXCLUSIVENESS ENTAILS

In the Lakshadweeps, the National Informatics Centre has the exclusive status of being the only organization working for the development of information technology. This distinction, brings with it, responsibilities of its own. As a result, the NIC Lakshadweep Union Territory Unit has to provide services ranging from data entry facilities for major national activities such as population census, economic census, agricultural census and rural water survey to technical advice in the purchase of computers by various government departments.

* * * *

And the Lakshadweep Union Territory Unit of the National Informatics Centre has carried its responsibilities well. The bottomline to all these is the efficient team work of the small set of NIC professionals in the archipelago. With the advent of information technology, the Lakshadweeps no longer remain a group of isolated islands cut off from the Mainland. Once again man has succeeded in taming nature, and in doing so, has woven the Lakshadweep more intricately with the texture of the Nation.



Inauguration of GISTNIC